VIET KHOI PHAM KHAC

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Education

PURDUE UNIVERSITY West Lafayette, IN
Bachelor of Science in Computer Engineering Expected Graduation, May 2025
GPA: 3.9 / 4.0
Dean's List and Semester Honors; Eli Shay Scholarship Recipient

Skills

Programming: Java, C, Python, MATLAB, HTML/CSS, JavaScript
Hardware: Arduino, 3D Printing, electronics, breadboard, soldering
Software: OpenCV, Git, Visual Studio, React, KiCad, Altium, Autodesk Eagle, Solidworks, Fusion360
Professional Organization: Purdue ECE Student Society (Faculty Outreach team), Purdue IEEE (Social Chair)

Experience

Purdue System-on-Chip Extension Technologies (SoCET)
PCB Team June 2022 – Present

- Designed and developed PCBs as test platforms to verify the functionality of and enable real-time communication with fabricated chips using KiCad
- Redesigned and improved old platforms to implement better communication with the chip through the use of on-board elements such as ring oscillator, serial-to-USB interface, and multiplexed DIP switches

Purdue Summer Undergraduate Research Fellowship (SURF)
RESEARCH FELLOW May – August 2022

- Researched dielectric elastomers actuators (DEAs) at Multimaterial 3D Printing of Bioinspired Robotics Lab
- Fabricated DEAs with a core-shell structure, tested the devices under high voltage to determine their break down strength, and analyzed the data using MATLAB
- Utilized SolidWorks to model a multi-material nozzle and utilized a digital light processing (DLP) 3D printer to manufacture the nozzles
- Wrote a final technical paper and present a symposium in front of a judge panel, consisting of Purdue's professors, graduate students, and post-doc students

Collaborative Robotics Lab at Purdue University - 4D Printer for Smart Device Printing
RESEARCH ASSISTANT February – May 2022

- Designed and fabricated smart devices, including the circuit board and the outer layers using only 3D printers
- Programmed an ESP8266 Wi-Fi Module for the smart devices to communicate with personal computers using Arduino IDE and display parameters on a custom-made website using HTML/CSS

Purdue IEEE – Computer Society
SOFTWARE TEAM August 2021 - Present

- Designed and built an 8-bit CPU's ALU, register files, and decoders using breadboards and ICs
- Developed a robot's software to follow a person with computer vision and speech recognition using Python's OpenCV library and made use of Raspberry Pi to configure and control motors

Purdue Lunabotics
POWER & HARDWARE TEAM August 2021 - Present

- Completed a robot for NASA Robotic Mining Competition regarding its power source and electrical hardware
- Customized motor controllers and PCBs such as breakout boards and buck converters using Altium
- Tested and assessed sensors for the Software team

Projects

ENGR 131 + 132: Transforming Ideas to Innovation I + II August 2021 – May 2022

- Designed a system that lights up bicycle lanes during night to ensure mobility safety on campus using Texas Instruments MSP432 P401R microcontroller and Grove - Ultrasonic Distance Sensor
- Developed an algorithm that utilizes data handling algorithms and mathematical models by to identify trends and make predictions from a dataset of enzymes provided by NaturalCatalysts, Inc. using MATLAB